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Manual Radiator Fan Switch

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Radiator Fan

Radiator Cover

Relay Switch

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08-17-2003, 11:54 PM

#1

[wolfman](#)
Super Member

Join Date: Jun 2002
Location: Texas
Posts: 12,066
[wolfman's Photos](#)

Manual Radiator Fan Switch

NOTE: This WILL NOT fix a fan that is actually BROKEN or otherwise completely non-functional. It WILL give you the option of turn on the radiator fan when YOU want to without affecting normal fan operation.

SUPPLIES

- 1 Automotive type switch your choice of style
- About 4 feet or so of 20 gauge wire (speaker wire will do)
- 1 Automotive test light

Remove the cover on the underhood fuse box and locate the relay labeled "FAN"

Pull up on this relay enough to access the metal contacts sticking down from the bottom of it but DO NOT remove it.

Connect the clip of your test light to GROUND

Probe each of the still connected relay contacts with the test light probe. Eventually you will find one that makes the relay CLICK and the fan come on when touched. Make note of which one it is.

Run a wire from where you want your switch to be to the relay you just tested. Remove the relay and insert the wire into the socket below the relay pin that "clicked" when you tested it. Now reinstall the relay so that it wedges the wire in place firmly in that socket with the relay installed. Test your connection by GROUNDING the other end of the wire. If all is well, the fan will come on.

Install your switch where you would like it. Attach the wire to the relay to one side of the switch and a wire to GROUND to the other side of the switch. With the switch "ON" the fan should now run.

IMPORTANT NOTES: This modification will NOT AFFECT "normal" fan operation. (It will still work "automatically" as before but you will also have manual control) This modification supplies GROUND to the OEM fan relay trip used by the PCM and does NOT require any additional fusing. This will activate the radiator cooling fan with the key on or off! On SOME Saturns, this will set an SES light if used with the engine running. FEAR NOT! This is harmless to the PCM and the SES light will go back OFF within a few secs/minutes of turning your manual fan switch back off. (It is just the PCM "seeing" the fan on when it does not "think" it should be)

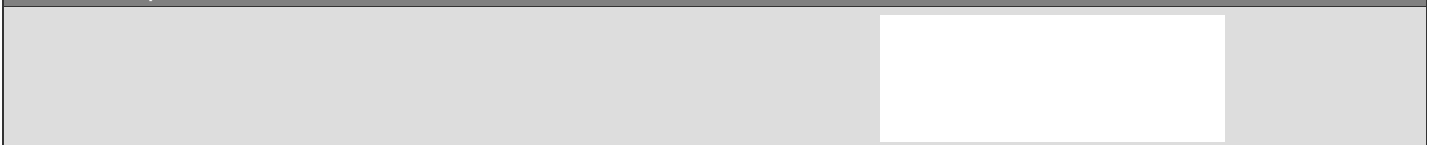
...

Old Saturns never die, people KILL them, so check your damn oil!
"Unthinking respect for authority is the greatest enemy of truth." Albert Einstein

REWARD EXCELLENCE!

Rate the quality of this post and help *wolfman* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

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11-22-2003, 11:03 PM

#2

[mclarenf1gtrv12](#)

Junior Member

Join Date: Jan 2003
Location: Redding ,California
Posts: 36

[mclarenf1gtrv12's Photos](#)

2002 SL2
2001 SC2

 **why do it**

maybe im just being stupid but what will making the fan manual do does it improve ability of engine to cool or what .What type of advatage does doing this really have.

REWARD EXCELLENCE!

Rate the quality of this post and help *mclarenf1gtrv12* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

11-22-2003, 11:54 PM

#3

[Twin_Cam](#)

Senior Member



Join Date: Nov 2002
Location: Camp Hill, PA
Posts: 1,684

[Twin_Cam's Photos](#)

2000 SL2



This allows you to turn the radiator fan on at will. The fan will turn on automatically when the temperature guage gets to the 3/4 mark, but that is way too hot. With the fan switch, you can turn the fan on as soon as it starts going over the 1/2 mark, which is optimal engine temperature. Anything above 1/2 is starting to put unnecessary wear on the engine and transmission.

...

'00 SL2m- DD, 186K miles
'05 Honda CR-V- wife's DD and my upright bass hauler
'84 Honda CB650SC Nighthawk- toy

REWARD EXCELLENCE!

Rate the quality of this post and help *Twin_Cam* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

11-23-2003, 12:05 PM

#4

[eljefino](#)

Master Member



Join Date: Mar 2003
Location: Standish Maine
Posts: 5,788

[eljefino's Photos](#)

1995 SW1
2000 SL1



I think [this](#) would work.

Normally, As the car warms up, the coolant in the block reaches 192°F (thermostat temp) then starts warming up the radiator (outside air, temp, say, 60°F). The rad would reach the engine temp eventually in slow/stopped traffic, i.e. both 192°F then both rad and block would continue rising to 212°F (or wherever the ecm kicks the fan on). [If highway speeds are used exclusively, the radiator temp is probably under 100°F by the above example.]

This product is a 170°F thermoprobe you stick (JB-Weld?) to the radiator tank. Wired to a relay, it would run the electric fan more of the time, whenever the rad is over 170°F. IOW, it would keep the radiator temp in a cooler range and the engine at exactly thermostat temperature, barring extreme circumstances. This is not like a cooler thermostat; the block temp is still factory spec 192°F for economy/performance/durability/emissions.

This would be a great mod for someone who drives highway mostly and rarely needs or wants the fan, but thinks it's silly to let the temp climb all that way sitting in traffic. It complements the manual rad switch or replaces it. One would (probably, am lacking included device instructions) wire this as another parallel switch to ground as Wolfman described. This is good for a car one lends out occasionally so the manual switch doesn't need explaining.

Recap: You'd have fan if
A: ECM sees it very hot (212 or 230°F?)
B: Air conditioning is running
C: Radiator is 170°F
D: Optional manual rad fan switch is engaged.

Hope this is clearer than mud.

REWARD EXCELLENCE!

Rate the quality of this post and help *eljefino* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

11-24-2003, 01:52 AM

#5

[Rob1998SL2](#)

Member

Join Date: Nov 2003
Location: MD and FL
Posts: 281

**Wolfman...**

How does one mount a switch in the cockpit? Where do the wires feed through to the engine bay? And where is a good location to mount the switch?

Thanks,
-Rob

REWARD EXCELLENCE!

Rate the quality of this post and help *Rob1998SL2* reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

11-24-2003, 06:31 AM

#6

[eljefino](#)

Master Member  Join Date: Mar 2003 Location: Standish Maine Posts: 5,788 eljefino's Photos 1995 SW1 2000 SL1 	A great spot for the switch is one of the pop-outs next to the rear window defogger button or under the radio if no a/c came with the car. Pop out the pop-out and drill an appropriate hole in the plastic. Pull wire through hole, attach to switch (solder/spade lug), pop back in. Near the brake booster under the hood is a grommet that can expand slightly to bring wire into the cabin. REWARD EXCELLENCE!  Rate the quality of this post and help <i>eljefino</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!
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11-24-2003, 10:21 AM #2	
Rob1998SL2 Member Join Date: Nov 2003 Location: MD and FL Posts: 281 	 Awesome... That helps a lot. Thanks! -Rob REWARD EXCELLENCE!  Rate the quality of this post and help <i>Rob1998SL2</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

12-15-2003, 12:36 AM #8	
jthj Member Join Date: Dec 2003 Location: Omaha Nebraska Posts: 97 	 Quote: <i>Originally posted by Twin_Cam</i> This allows you to turn the radiator fan on at will. The fan will turn on automatically when the temperature guage gets to the 3/4 mark, but that is way too hot. With the fan switch, you can turn the fan on as soon as it starts going over the 1/2 mark, which is optimal engine temperature. Anything above 1/2 is starting to put unnecessary wear on the engine and transmission. I wonder why Saturn engineers deisgned it to wait so long. Save electricity???? REWARD EXCELLENCE!  Rate the quality of this post and help <i>jthj</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

01-08-2004, 10:38 PM #9	
92SL1Mann Advanced Member Join Date: Nov 2003 Location: Ghetto St. Thomas, ONT Posts: 682 92SL1Mann's Photos 1992 SL1 1996 SC2 	 Manual Fan Mod eljefino....why would you need fan when the a/c is on? I dont know that much about that....thanks ... 1992 SL1, 376,000Kms 1996 SC2, 243,000Kms REWARD EXCELLENCE!  Rate the quality of this post and help <i>92SL1Mann</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

01-09-2004, 12:25 PM #10	
eljefino Master Member  Join Date: Mar 2003 Location: Standish Maine Posts: 5,788 eljefino's Photos 1995 SW1 2000 SL1 	 The fan runs automatically with the a/c to blow air over the condensor (part of the a/c system) and cool that; cooling the engine radiator is almost a side-effect. It's a pleasant side effect since it's usually quite warm out when the a/c is running and the engine will like that too. I was suggesting the blank pop-out space the optional a/c button would fit in for a good place for the switch. REWARD EXCELLENCE!  Rate the quality of this post and help <i>eljefino</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

01-09-2004, 06:26 PM #11 92SL1Mann Advanced Member Join Date: Nov 2003 Location: Ghetto St. Thomas, ONT Posts: 682 92SL1Mann's Photos 1992 SL1 1996 SC2	Thanks eljefino ... 1992 SL1, 376,000Kms 1996 SC2, 243,000Kms REWARD EXCELLENCE! Rate the quality of this post and help <i>92SL1Mann</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!
01-11-2004, 03:12 PM #12 Luke Master Member Join Date: May 2002 Location: Laguna Bch, CA Posts: 4,159 1995 SL2	Guys, this is just for the explanations for a <u>particular procedure</u>....not a discussion area. Your points should be made over at the regular forum. ... > 95 SL 2 = 653,369 Miles 40.4 MPG, as of 5/20/11. My manual Radiator Fan Switch, courtesy of Wolfman's patient installation guidance, continues to be.....invaluable < The car was retired REWARD EXCELLENCE! Rate the quality of this post and help <i>Luke</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!
04-03-2004, 02:50 PM #13 Mog Member Join Date: Mar 2004 Location: New York Posts: 123 Mog's Photos	Is an automotive test light something as simple as I am thinking? I've never herd of that before. REWARD EXCELLENCE! Rate the quality of this post and help <i>Mog</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!
07-30-2004, 08:52 PM #14 zippy_LiL_sl1 Junior Member Join Date: Feb 2004 Location: PA Posts: 30 zippy_LiL_sl1's Photos	although a test light is probably a good idea, I don't have one. I just used a piece of wire to jump 2 slots at a time until I heard a click. I blew a fuse doing it. Replaced the fuse and tried other slots. Yeah got it to work... but no one around here sells decent switches with the correct rating. Anyone know of a good spot to get cool switches? REWARD EXCELLENCE! Rate the quality of this post and help <i>zippy_LiL_sl1</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!
07-31-2004, 07:14 PM #15 sierrap615 Master Member Join Date: Aug 2003 Location: Downers Grove, Illinois Posts: 2,538 sierrap615's Photos	the switch is placed on the low current side of the relay, not the high. so the switch doesn't need to be rated at 30 amps, less then 100mA will go thru the switch. i know wolfman says the fan should not be on at speeds over 40. without the override switch, does the PCM turn off the fan automaticilly at high speeds? ... Formerly - Saturn of Downers Grove Parts Department Current - Castle Chevy in Villa Park Parts Department EPA 608 Certification EPA 609 Certification REWARD EXCELLENCE! Rate the quality of this post and help <i>sierrap615</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you!

08-01-2004, 09:20 AM Luke Master Member  Join Date: May 2002 Location: Laguna Bch, CA Posts: 4,159 1995 SL2 	#16  Yes Quote: Fm Sierrap does the PCM turn off the fan automaticilly at high speeds? Yes it does; And I believe that the shut off speed is it at 70 mph. Atleast that is what I recall reading from the Factory Service Manual (FSM) for my '95 SL 2. ... > 95 SL 2 = 653,369 Miles 40.4 MPG, as of 5/20/11. My manual Radiator Fan Switch, courtesy of Wolfman's patient installation guidance, continues to be.....invaluable < The car was retired REWARD EXCELLENCE!  Rate the quality of this post and help <i>Luke</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you! 
08-09-2004, 10:13 AM geartooth94 Master Member  Join Date: Mar 2003 Location: Allentown, PA Posts: 3,879 geartooth94's Photos  	#17  anyone know if I'd be able to use a lighted 12VDC switch? Would this require the gauge of the switch wire to be thicker? ... 1996 Dodge Avenger ES: 2.5L V6 REWARD EXCELLENCE!  Rate the quality of this post and help <i>geartooth94</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you! 
08-09-2004, 11:19 AM bbarbulo Advanced Member  Join Date: Nov 2002 Location: Canada Posts: 815 	#18  withphone, I don't think so... the operative here is the <u>ground!</u> for the relay, not +ve, so I'll go ahead an assume there is no power running here thereby making the lighted switch useless. REWARD EXCELLENCE!  Rate the quality of this post and help <i>bbarbulo</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you! 
08-09-2004, 02:38 PM Luke Master Member   Join Date: May 2002 Location: Laguna Bch, CA Posts: 4,159 1995 SL2 	#19 Quote: Fm Bruno so I'll go ahead an assume there is no power running here thereby making the lighted switch useless.... Am I out of the loop on this issue? I found that a lighted switch was perfect for me to remind me that the manual switch had been activated. ... > 95 SL 2 = 653,369 Miles 40.4 MPG, as of 5/20/11. My manual Radiator Fan Switch, courtesy of Wolfman's patient installation guidance, continues to be.....invaluable < The car was retired REWARD EXCELLENCE!  Rate the quality of this post and help <i>Luke</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you! 
08-09-2004, 03:25 PM bbarbulo Advanced Member  Join Date: Nov 2002 Location: Canada Posts: 815 	#20  The way my switch is set up, it just provides a ground to the relay, so there is nothing to power the lighted switch. I dunno, maybe you guys set yours up diff't. Mine was done originally on my first Saturn by an elec engineer, and I just swapped everything over onto my second saturn as I found it. REWARD EXCELLENCE!  Rate the quality of this post and help <i>bbarbulo</i> reputation points. Click the reputation button near the bottom left corner of this message box. Thank you! 

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[Zeebins](#)

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